

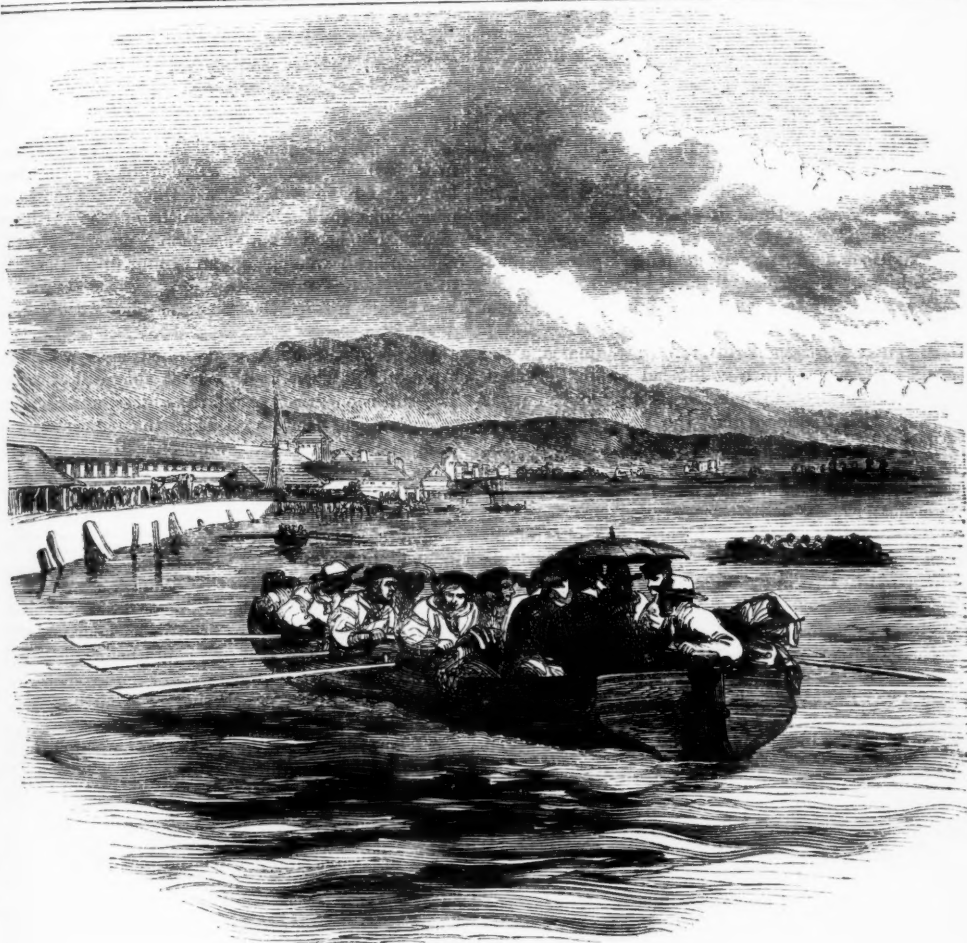
THE LEISURE HOUR

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"SHARKS! PORT ROYAL HARBOUR IS CHOCK FULL OF THEM!"

THE CAPTAIN'S STORY:

OR, ADVENTURES IN JAMAICA THIRTY YEARS AGO.

CHAPTER II.—ASHORE.

"By the by," said Harry, "you and Johnny got a ducking this morning, didn't you?"

"Yes, the cabin was half full of water."

"Ah!" laughed Harry, "that comes of sleeping with your port open—a green trick, Master Brook."

No. 402. 1859.

"Why, how was I to know, or to guess that we should have a squall like that? there wasn't a breath in the heavens, and the sea like oil, when I turned in last night."

"Exactly so, my boy!—it is because you *are* green, that you could not guess we might have a squall."

"Come now, Harry, hadn't you your port open? I believe he got ducked too, only he won't own it."

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"Who, I? not a bit of it; catch a fellow who has been in the parts before, leaving his lower port open at night; not he, he knows better; these tropical squalls come with a 'hop, step, and a jump,' I can tell you. Look here! isn't that glorious?"

Port Royal harbour lay broad before us; we had a leading wind in, light but steady; our courses were brailed up, and we were gliding smoothly and majestically to our anchorage.

Immediately on our right were the Artillery and Infantry barracks; I could have chuckled a biscuit into the lap of an artilleryman as he sat on the low sea-wall dangling his legs over the water.

Harry observed the man.

"That fellow has not been long out here, I'll warrant," he said.

"No, I suppose not; he looks too ruddy."

"It's not by his face, but by his legs I judge."

"His legs! what is the matter with them?" I exclaimed in astonishment.

"Nothing at present, but a good deal might be the matter with them if—oh! others think the same—look."

I did look, and saw a sergeant go up to the man, take him by the arm, and make him get up.

"What's all that about? What was the harm of his sitting there?"

"When I was last quartered in Jamaica, a sad accident happened to a young lad, an artilleryman, who had just come out from England. He was sitting with his legs over the wall, just as that fellow was, when suddenly a huge shark dashed at him—snap—they were both gone."

"Both what? shark and man! pulled him in, do you mean?"

"No, both the man's legs were gone, sheared off just below the knee, as a donkey would bite a couple of carrots in two."

"Come, Harry, I say, draw it mild; I am green enough, I know, but I can't quite swallow that."

"You may, then, for it's perfectly true; I saw the man myself afterwards. If you had chopped his legs off with the sharpest axe, you couldn't have done it cleaner. As a proof of the sharpness and rapidity of the blow, the man was not even dragged off the wall."

"How dreadful! did he live?"

"Oh no, poor fellow, he bled to death before they got him to the hospital. There was an order issued at the time, I remember, forbidding the men from sitting on that wall; and I have no doubt it is still in force, and that is the reason the sergeant took that fellow away just now."

"Are there often sharks so close in?" I asked rather anxiously, for I had already meditated a bathe in the clear bright waters.

"The harbour is chock full of them always," was the answer; "so, if you were thinking of taking a dip in here, dismiss the idea *instantly*. Did you ever feed fish in a pond?"

"Feed fish? Yes, I believe so."

"Ah, well then, you can understand me; suppose yourself the piece of bread, and fancy the perch and

trout that are dashing at it to be sharks, and you will have a tolerably good idea of what your fate would be if you were to tumble into this harbour." I shuddered at his description.

"How large is a shark, Harry?"

"Sharks are like their neighbours, of different sizes; the largest I ever saw was seventeen feet long; his jaws were wide enough to take a man in bodily, without munching him *en passant*; and not a very small man, or a very narrow-shouldered one either, unless you think I answer to that hail."

"What do you mean? Did he swallow you alive?"

"No, he swallowed me dead—ha ha! Master Brook, I've had my head in a shark's mouth if I haven't in a lion's, and that's more than you can say!"

"Come, tell us, there's a good fellow; how was it?"

"Well, I will—it was 'just this away,' as they say in Paddyland. A shark was caught seventeen feet long, as I have said before; this was a most unusual size, and Doctor Smith of the Artillery wanted his head as a specimen; accordingly, the shark's head was cut off and hung up in the bush to dry."

"Hung up in the bushes! how could that dry it?"

"Not in the bushes," laughed Harry, "but in 'the bush,' what in the East they call 'jungle.' The sun soon dries up all the juices, and the ants eat up all the flesh; well, I saw that same specimen when it was well dried, and I opened its jaws and passed them over my head and shoulders quite easily; but, however, he was a regular leviathan: the usual run of sharks is from seven to eleven or twelve feet, though they say that Port Royal Tom must be twenty or thirty feet long."

"Port Royal Tom! is that a shark?"

"Ay! he just is a shark; when I was here last, they talked of his having been in harbour upwards of twenty years; and if you could believe half you heard of his size, he must have been about as big as a whale. I wonder whether he is alive now."

"Did you ever see him?"

"I don't know; I am not sure. I was told I did once both see him and hear him."

"See him and hear him! how was that?"

"I'll tell you another time—look here! just look at those splendid Liguanea mountains."

"You always say you will tell me another time," I murmured; "what mountains do you say? what do you call them?"

"The Liguanea mountains; ain't they glorious? Did you ever see such fantastic forms and shapes crowded one on the top of the other, in the most beautiful confusion? They always remind me of a piece of silver paper crumpled up in one's hand and let go again, to expand into countless holes and peaks, ridges and ravines."

"Why, Harry, I declare you are quite poetical; who'd have thought it?"

"I don't know whether I am poetical or not, but I do know that Jamaica is the most beautiful spot on earth I ever saw in all my time. Look there! do you see the smoke hanging in graceful festoons,

like fleecy clouds, over yonder point, and beneath it the glitter of buildings? that is Kingston, the capital of the island; or, if not the capital, the largest and most populous town by a good deal."

"Oh yes, I see it; but which is the capital, then?"

"Why, Spanish Town is the capital, I believe; at least I know the seat of government is there—'Government House,' as they call it; and the Legislative Assembly meet in Spanish Town, and—oh yes, it is the capital, but it is not half as big nor half as rich as Kingston."

"How far off is Kingston? it must be four or five miles, isn't it?"

"It's eight miles good measure, my boy; nothing so deceptive as distance on water, especially in the tropics, where you can see twice as far as in our northern latitudes."

"What's that fort to the left, there, Harry, close to the water's edge?"

"That's Apostle's Battery; an artillery station, and an out-of-the-way station it is: right over Apostle's Battery, about ten or twelve miles inland, lies Spanish town."

"What a wretched-looking place Apostle's Battery is, out in the middle of the bay on that point of land; I shouldn't much like to be quartered there."

"It will very likely be the first place you are quartered at."

"Why, I thought you said it was an artillery station?"

"So it is, but we sometimes send a subaltern's party there."

At this point we were interrupted by a crowd on the fore-castle, and a chaos of sounds. We were close upon our moorings—out rattled the chain cables—shrilly piped the *bo's'en*—hoarsely roared the first lieutenant—and between rattle, scream, and shout, we were at anchor.

Port Royal is but a poor place; hot and unhealthy, no one lives there who can help it. Two companies of artillery and one of the line were a sufficient inducement to a few needy or avaricious individuals to locate on that heap of burning sand, and to set up shop, or, more politely speaking, "stores," for the accommodation of the military and for their own profit. One of these "stores" was kept by one "Johnny Ferong," a name well known to every visitor to Jamaica, for many and many a year.

Everything on board a man-of-war is carried on with so much regularity and order, that we soon found ourselves quietly lying at anchor, with sails furled, ropes coiled, and all noises silenced. The captain walked up and down on the weather quarter, and the marine sentry paced the deck in his white dress, looking as clean and as cool as though we were at Spithead instead of Port Royal. We also had to look after our men, and see that they were polished up a bit after their sea voyage, ready for landing the next day. It turned out that we were bound for Stony Hill, a barrack eight or ten miles north from Kingston.

Towards evening our duties were all over, and those who chose might go on shore. Most of us

did choose; we all had a natural yearning for *terra firma*, after having been so long at sea; and for my part, I was wild with excitement and curiosity to land and see something of the beautiful country upon which I had gazed all day from afar; not that I should see a bit more of it from Port Royal itself, than from its harbour; but, at all events, I should be on shore, actually in Jamaica.

RAMBLES IN THE TYROL.

PART II.

THE situation of Innsbruck is the theme of universal praise. It stands on the banks of the Inn. When you are in the street, the mountains at the back of the city look so near, that you seem to be under inspection of the wolves which infest the tops. There is plenty of open space before the town. The mountains to the north-east are a good way off. Shall we confess, that our first view of Innsbruck was a little disappointing? That, however, is the truth. We came to it along the plain from the north-east. Had we come to it from the south, over the Brenner Pass, up from Italy, the effect would have been different, as we found a day or two afterwards, when making an excursion to the Brenner, and returning to Innsbruck by the mountain road winding down to the plain. There the first view you catch of the city is enchanting. The Brenner, too, is a wonderfully beautiful Pass in itself; the road running high up on the side of the mountain ridges, and commanding prospects below of wood and water, of rare loveliness.

But a word respecting Innsbruck. We admired the city much—a little unpretending capital of a romantic, brave, free people. One large broad street, that would be no disgrace to any city, with fountains and statues in it, and noble-looking houses and hotels, narrow streets running out of it, broad roads by the river side, with avenues of trees, a bridge, several churches, one or two being very fine—such is Innsbruck. But, to be for a moment more particular. There is a curious little bit of architecture in the heart of the town—the golden roof, it is called—surmounting a gallery projecting from what forms a part of the old palace of the counts of the Tyrol. It was built of gilt copper by Frederic, nicknamed "Count of the Empty Purse." He built the thing to confute vulgar slander; certainly it was the way to make the current report about the emptiness of his purse quite true.

The Franciscan or Court church is the glory of Innsbruck. There is the far-famed tomb of Maximilian; a noble shrine, surmounted by a statue of the Emperor kneeling, and with a row of tall bronze figures, larger than life, standing on each side, twenty-eight in all, very ghost-like in appearance, as you see them in the dim hour of evening. The sculptures in relief, on Carrara marble, forming the sides and ends of the sarcophagus, are exquisite beyond anything of the kind we ever saw—worth hours and hours of study. They supply a complete history of Maximilian. Hofer, the great Tyrolese patriot, is also buried in this church. His grave is covered by his statue, in which he appears in his

native costume, with his rifle slung over his shoulder and an unfurled banner in one hand.

From Innsbruck we proceed to Landeck, through one of the lateral valleys of the Tyrol. It is of considerable breadth in some parts, and then again it is shut in within narrow dimensions. Here we pass the Martinsward, a huge rock connected with the following legend. "The Emperor Maximilian, that enthusiastic sportsman, led away on one occasion in pursuit of a chamois among the rocks above, by ill luck missed his footing, and rolling headlong to the verge of the precipice, was just able to arrest himself, when on the brink of destruction, by clinging, with his head downwards, to a ledge of rock in a spot where he could neither move up nor down, and where, to all appearance, no one could approach him. He was perceived from below in this perilous position, and, as his death was deemed inevitable, prayers were offered up at the foot of the rock, by the abbot of Milten, as though for a person in *articulo mortis*. The emperor, finding his strength failing him, had given himself up for lost, and recommended his soul to heaven, when a loud hallo near at hand arrested his attention. A bold and intrepid hunter, named Zips, who had been driven to the mountains to avoid imprisonment for poaching, had, without knowing what had happened, also been drawn to the spot, in clambering after a chamois. Surprised to find a human being thus suspended between earth and sky, he uttered the cry which attracted Maximilian's attention. Finding the perilous nature of the case, he was in a few minutes at the emperor's side, and binding on his feet his own crampons, and extending to him his sinewy arm, he succeeded, with difficulty, in guiding him up the face of the precipice, along ledges where to appearance even the chamois could not have found footing, and thus rescued him from a situation of such hopeless peril that the common people even now attribute his escape to the miraculous interposition of an angel. The spot where this occurred, now hollowed out into a cave in the face of the rock, is marked by a crucifix, which, though eighteen feet high, is so far above the post road that it is barely visible from thence. It is now rendered accessible by a steep and rather difficult path, and may be reached in about half an hour's walk from Zirl. The cave is 750 feet above the river, and the precipice is so vertical that a plumb-line might be dropped from it into the high-road below. It is traditionally stated that Maximilian rewarded the huntsman with the title of Count Hollauer von Hohenfels, in token of his gratitude, and in reference to the exclamation uttered by him, which had sounded so welcome to the emperor's ears by announcing that relief was at hand. From the emperor's pension list, still in existence, it appears that a sum of sixteen florins was annually paid to one Zips of Zirl."

On the road, a spot is pointed out where the king of Saxony was killed a few summers ago. A slender church is built over the spot, by his widow. Landeck is beautifully situated, embosomed among mountains. Pursuing our course to the Stelvio, now the grand point of our journey, we traversed another portion of the valley of the Inn more beautiful than we had seen on the road from Salzburg.

Any description of it would resemble previous descriptions, but the scene itself had variety not traceable in words.

The Finstermunz, however, must be noticed. It is the narrowest part of the valley. Getting down to the river-side, you have rocks rising up almost perpendicular on one side, and quite so on the other. Over-head the rocks jut over and nearly meet. There the river is jammed in between enormous masses; a little bridge crosses the foaming waters; a ruined tower surmounts it, and a few houses are grouped together just by. The spot is gloomy, but most grand. Emerging from it, the mountains are seen towering up to heaven, clothed half-way with trees, the tops bleak and bare; and along the line, where the thick wood terminates on the left hand bank of the river, runs the new road, now being made by the Austrian government—a marvellous piece of engineering—sometimes forming a gallery cut through rock, and sometimes overhanging frightful abysses. It winds at length into a deep gorge, and there Austrian fortifications are placed, shutting up the entrance with cannon planted in deep embrasures, very terrible to look at.

Before we leave the Finstermunz, we must refer to a scene in the Tyrolese war. "The fate of a division of 10,000 men belonging to the French and Bavarian army, which entered the Upper Innthal, or Valley of the Inn, will explain in part the means by which the victories of the Tyrolese were obtained. The invading troops advanced in a long column, up a road bordered on the one side by the river Inn, a deep and rapid torrent, where cliffs of immense height overhang both road and river. The vanguard was permitted to advance unopposed as far as Prutz, the object of their expedition. The rest of the army were therefore induced to trust themselves still deeper in this tremendous pass, where the precipices, becoming more and more narrow as they advanced, seemed about to close above their heads. No sound but of the screaming of the eagles disturbed from their cries, and the roar of the river, reached the ears of the soldier; and on the precipices, partly enveloped in a hazy mist, no human forms showed themselves. At length the voice of a man was heard calling across the ravine, 'Shall we begin?' 'No,' was returned in an authoritative tone of voice, by one who, like the first speaker, seemed the inhabitant of some upper region. The Bavarian detachment halted, and sent to the general for orders, when presently was heard the terrible signal: 'In the name of the Holy Trinity, cut all loose.' Huge rocks, and trunks of trees, long prepared, and laid in heaps for the purpose, began now to descend rapidly in every direction, while the deadly fire of the Tyrolese, who never throw away a shot, opened from every bush, crag, or corner of rock, which could afford the shooter cover. As this dreadful attack was made on the whole line at once, two-thirds of the enemy were instantly destroyed; while the Tyrolese, rushing from their shelter, with swords, spears, axes, scythes, clubs, and all other rustic instruments which could be converted into weapons, beat down and routed the shattered remainder. As the vanguard, which had reached

Prutz, was obliged to surrender, very few of the 10,000 invaders are computed to have extricated themselves from the fatal pass."

The road from the Finstermunz to Mals, and on to the entrance of the Stelvio, is inferior in scenery. The chief thing that interests one there is that it forms one of the grand water-sheds of Lombardy. By the side of your carriage gushes the infant Adige, which rolls in such a broad rapid flood under the towers of Verona.

Beyond Mals you begin to see the snow mountains. You are already some thousand feet above the level of the sea. Yonder are white peaks piercing the blue sky. You turn off into a narrow valley. There, up in the mountains, is the tiny village of Stelvio, giving its name to the pass. The pass narrows and narrows, as you ascend—trees, rocks, cottages, wooden bridges, enlivening the road. Then you get to a point where a glorious glacier opens before you. There it is—ice, ice for miles, spreading in furrowed sheets down the mountain side, which forms the sloping wall of the prospect a-head of you. A dark rock projects in the middle, dividing the glacier into two branches; above the ice is snow, snow, snow, glittering in the sunbeams, with clouds sailing over or hanging on it. The snow looks in parts like burnished, in parts like frosted, silver. The play of shadows from glittering rocks, all snow-covered, is exquisite. Black pine forests, and tracts of scanty herbage, form the lower portion of the picture. Look up on the right hand—see the ziz-zags cut on the side of the mountain; that is the road we have to go. Send on the carriage, and let us walk. Backwards and forwards, we wearily climb up the broad road, now slanting this way, now slanting that. Gradually we begin to get above trees; it is very bare all round you; a little grass and wild flowers, that is all. On the left there is the glacier, and the glorious Ortler Spitz, radiant with the noon-day sun. The road is, in parts, covered by a long shed to keep off the winter avalanches from the traveller; heaps of snow, by the road side, begin to tell you what snow there has been there, and that not long ago, though it is now the month of August. What must this be in winter? you ask. Zig-zag, slope, slant—up and still up—more bare, more rugged—less life, less heat—till you reach the top, 9272 feet above the level of the sea. There you leave the Tyrol. Crossing the border, you enter Lombardy. The road takes you to Como and Milan.

In speaking from personal observation of the more trifling manners and customs of the Tyrolese, we can only jot down a very few things. Travellers often see what the inhabitants of a country never do see. For instance, we find an American traveller gravely relating that, some time ago, when the queen was embarking at Brighton, the usual carpet was not laid upon the wharf, and the mayor and aldermen pulled off their scarlet robes of office, and laid them down for the royal lady to walk on—that in London, people never salute each other in the street—that everybody carries a nosegay either in the coat, the hat, or the hand—and that every Londoner who goes abroad to make a call, calculates

on losing a day, and spending a sovereign. Now we will take care not to get so far out of the way as that. We will ourselves make no sweeping remarks at all, but confine ourselves to what we saw with our own eyes; and when giving an opinion second-hand, give it in the words in which we received it. Of course, it was at inns, and in the streets and roads, that we caught glimpses of Tyrolese life.

The accommodation, fare, and general treatment at the country inns, are all plain but pleasant. Arrived at noon, at the place where one stops to bait, there is the neat dapper maid, with her dark boddice and white sleeves, a large money-bag, a bunch of keys at her girdle, and a spoon stuck in it as symbolical of office. Fishing up out of a water-trough by the inn door some beautiful little trout, they were soon on the table, boiled or roasted. A fowl or some meat is added to the repast. One day the waiting woman came and sat down with us at the table in a very friendly way, not to partake of the viands, but to see how we ate, and to puzzle us with a little *patois* German. Dropping into the kitchen, everything looked black and slovenly enough, except the culinary utensils, which were as bright and clean as in any English house. High up on the mountain—on the top of the Stelvio, for instance—you see rude life enough—a rambling kitchen, pretty black; fowls chirping and crying under the table, or in coops; a huge chimney corner, with perhaps a boy asleep on one side, and a girl on the other; the humble landlady very pleased to see you amused, and showing the utmost kind-heartedness and hospitality in producing her simple and rather hardy fare. It is very entertaining to read in the books kept at the inn, the criticisms of travellers; some very stupid, and others very ill-natured. For our own part, we found, except in a few instances, little to be complained of by a man who was not so foolish as to expect to find English comforts in Tyrolese valleys. Apartments, beds and bedding, and so forth, are generally clean and comfortable; certainly, in some instances, there are various accompaniments far from agreeable. The winding up of accounts at the little inns is often a troublesome affair, from the complexity of the money calculations in the Tyrol; Bavarian money and Austrian money both being circulated, the paper used to a large extent being at a discount, and bearing a conventional value not at all easy to estimate. We may add that the charges in the Tyrol are by no means so low as they used to be some years ago. Friends who travelled there ten or fifteen years since, gave us accounts of cheap accommodation which were not realized in our own experience.

[To be continued.]

THE "GREAT EASTERN" STEAM SHIP.

THE Englishman is fond of his holiday. The hard-worked, energetic Londoner delights to forget "business" for a while, and give rest to his overwrought brain. It is, moreover, a peculiar trait in his character, that if he can manage to mix up a

little instruction with his relaxation, he will always gladly do so. On Whit Monday and Tuesday last the streets of London were thronged with citizens, bound in various directions, in search of anything but work. In the "Times" of those days had appeared an advertisement that the "Great Eastern" steam ship could be visited, and we were much pleased to see how many thousands took this opportunity of getting a look at this monstrous specimen of England's naval architecture. The steamers from London were crowded, and the Blackwall line had enough to do to find seats for passengers, on their way to get an outside view of the "Great Eastern," even if they could not afford to pay for admission to go over her.

As the river steamer paddles slowly up past Greenwich, a huge inert mass obstructs our view, just above the floating hospital for sick seamen. Surely, that cannot be her—that cannot be the big ship; "and what is that black line moving on her side, like ants upon an ant-hill?" we involuntarily exclaim, as we get our first view of her.

"Oh, that's 'er; and the mark on her side is the people—the visitors, a-going up and down, sir," the call-boy of the steamer volunteers to inform us.

"Ease her. Stop her." We are along-side. What a gigantic mass she is! and what a precipice to climb up to get on board! and all made of iron too—iron, that but a few months ago was a black, dirty, shapeless metal, hidden hundreds of feet deep in the bosom of the earth, but now a beautiful ship that will shortly

"Walk the waters like a thing of life."

To the bold conception of Mr. Brunel, and the constructive skill of Mr. Scott Russell, the existence of this huge ship is mainly due, and in her structure many principles are adopted which the engineer calls new, but which the student of nature pronounces adaptations of contrivances found in many plants and animals. Most animal organisms commence existence with a simple cell: and this enormous ship is simply a vast cell, containing an assemblage of numerous minor cells. If we made a section right across her centre, we should find that her external casing is double; exactly as though you were to put a Thames punt inside a Thames barge, keeping them apart by means of iron plates, which together form a wall of cells like a honeycomb. The reason of this is obvious; a hole may be made in the outer case (the barge) and the water rush in, yet the ship will not sink, because the inner casing (the punt) remains uninjured. We have a somewhat similar structure even in our own skulls. The delicate brain within is defended by a double casing, containing cells of bone. If a blow is received on the head (the outer wall) and the adjacent cells are broken down, the brain is protected by the inner casing, and the person's life is saved. Our brave firemen also have adopted this idea in the formation of the crests of their leather helmets, so that a brick or beam falling from the top of a house should not injure their heads.

If we make a section of the "Great Eastern,"

from stem to stern, we shall again see partitions running across, dividing her into ten compartments, just as, if we divided a wheat straw down the centre, we should see partitions at the knots in it. Any one, two, or three of these compartments may be filled with water, yet, the others remaining sound, will keep her up. We break a wheat straw between two of the knots, and throw it into the water, it does not sink, for the other lengths continue water-tight, and bear it up. It would have been impossible to have built this big ship in one solid piece of iron, as the savage hollows his canoe out of the trunk of a tree. Her sides, therefore, are formed of plates of iron, about ten thousand in number, and each plate had to be cut out and its curve carefully modelled. There are no two plates that have the same curve; so that we cannot but admire the accuracy which has produced a ship of this size as clean in her lines as a small Thames wager-boat. The plates are bolted together with short iron rivets, driven, at white heat, into holes in their overlapping sides, and there clenched. Of these bolts, about three million have been driven in by blows of the hammer.

If we examine the anatomy of the shell of the common tortoise, we shall find it composed of numerous plates of bone, fitted one to the other, like the iron plates of the "Great Eastern," except that Nature employs a much neater mode of joining them than the comparatively clumsy plan of riveting.

We are now on board, and, standing at the stern, see a smooth deck before us, 692 feet long, composed of no less than eighteen miles of five-inch planking; this deck is eighty-two feet across the hull, and 120 at the paddle-boxes. Let our country readers mark out this space with sticks in their newly-mown hay-field, and they will have a better idea of her size than mere figures can give. We may tell our London readers that she would not be let down in Grosvenor Square, nor yet in Belgrave Square. Berkeley Square would take her in, if her bows were allowed to project some little way up Davies Street. Portland Place would be but a gutter to contain her, for she could just manage to steam up, scraping with her paddle wheels the houses on each side.*

It may be interesting to many to know what comparison the great iron monster bears to Noah's ark. The lamented Hugh Miller, in his "Testimony of the Rocks," states that if the sacred cubit be taken as equal to the length of a man's forearm and hand, the most natural standard, the ark must have been a vessel 450 feet in length, seventy-five feet in breadth, and forty-five in height. Dr. Kitto calculates that it was 547 feet in length by ninety-one feet in breadth; so that we see before us a structure adapted for floating on the water, positively larger than the ark itself.

Besides her upper deck, the "Great Eastern" has three complete iron decks, towards her bows, and these extend backward 120 feet; they cover

* See Quarterly Review, 1855-56, Vol. 93. In Leisure Hour, Nos. 205 and 306, will be found descriptive notices of the ship during its progress of building.

8000 square feet, and afford stowage for 1400 tons of cargo, or a crew of 300 or 400 men. The passenger accommodation is amidstships—the best place to go even in common ships, if sea-sickness is troublesome; the cabins are as large as the parlours of most London lodging-houses, and the sleeping-places are made to fold flat against the wall, so as to afford a pleasant sitting-room in the day time. There is accommodation for 500 first class and 400 second class passengers, or, if necessary, an army of troops. Imagine the flocks of sheep, herds of oxen, sacks of flour, etc. that will be requisite for the commissariat of this floating city, and all this has been duly provided for. In case of it being necessary for this population to decamp from their quarters at a short notice, this mother ship has on board a family of twenty young ships or boats, fitted with masts and sails complete, besides her eldest children, namely, two small screw steamers, each of which is to be 100 feet long by sixteen wide, of 130 tons measurement and forty-horse power. In this respect, as well as in her internal construction, she resembles the fresh-water polyp, the hydra, which, if cut to pieces, each piece becomes a separate animal. Break up the “Great Eastern,” and she splits up into several little Easterns, shooting forth at the same time a brood of small but perfect representatives of her former self.

Here, then, we have this enormous vessel, weighing above twelve thousand tons: the problem is, how she is to be propelled, cargo, passengers, and all, to Australia and back. What human arms cannot accomplish, human brains perform, by capturing, enslaving, and making to work for them, our sworn enemies, fire and water; the result of their disagreements being strength, almost indefinite, to their master, man.

The heart of the “Great Eastern,” the origin of her life, so to speak, is a steam engine—a Goliath compared to all other engines. We know that when we put a tiny flea under the microscope, it looks as big as a frog. Imagine the engines of a small river steamer also, and we shall have some idea of the relative size they bear to the engines to which we are ordinarily accustomed.

Though apparently one set of machinery, if we anatomize this forest of metal rods, we shall find, not one engine, but four engines, each separate and distinct from its neighbour, and each capable of distinct action, reminding us forcibly of the human heart with its four cavities.

Not only do these engines propel the vessel, but they also do the work of a large staff of sailors. They can heave the anchor, haul the sails, cook the dinner, clean the decks, put out the fire, smother the rats and cockroaches, and scream when anything goes wrong, and they want looking to. No maid-of-all-work ever worked so hard, or will ever work; and yet they do all this without a word of grumbling, provided their joints are well oiled, and their voracious appetites are well supplied with their accustomed preserved vegetable food, namely, coal—of which their daily rations will be 250 tons, and which they take quite hot, but not smoking hot, because they devour the smoke as well as the fuel, so that, unlike little Bo Beep's

flock, they will not “leave their tails behind them,” when puffing along in calm weather.

In the natural creation, there are three principal modes of progression; animals walk upon their legs, fish swim by means of their tails, and birds fly with their wings. Our great sea giant will do all three; he will gallop along over the waves with feet-like paddles, as fast as the antelope over the trackless desert; he will scull along with his screw-propeller, swift as a Scotch salmon stemming the boiling mountain stream; or he will spread his white wings to catch the favouring gale, soaring along like the eagle, the monarch of the clouds. What a splendid sight will he be, the embodiment of human engineering skill and human triumph over inanimate things, charging the mountain-like waves of the Atlantic with the force of thirty regiments of Life Guards,* splitting asunder and riding triumphantly upon their broken and foam-covered crests; or else, with twelve thousand square yards of canvas upon six masts, spread to the tropical trade winds, floating along on her homeward voyage like a gigantic pearly nautilus arisen for a time from the coral depths of the vast ocean.

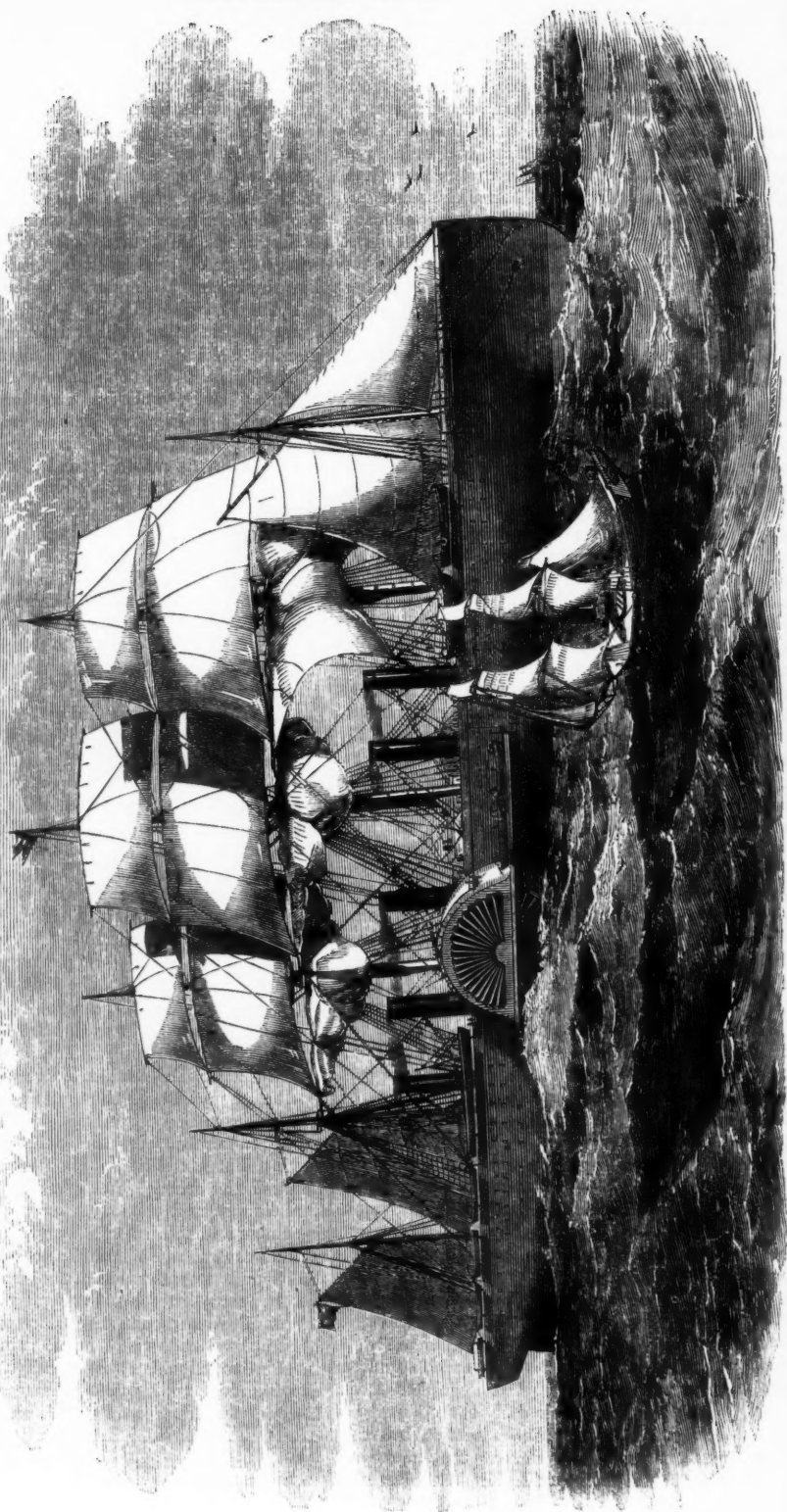
But what bit shall we put in the mouth of this sea horse? what bridle will hold him down in his furious plungings? no less than sixteen anchors, ranging from one ton to seven tons weight each, are attached to upwards of a thousand fathoms of chain cables, all of the most massive description; and thus we have a tether almost strong enough for Archimedes to have tied up the world with after he had moved it out of its place with his lever.

When in full working order, this enormous ship, with its crowd of passengers, cargo, etc., will all be subject to the will and the orders of one single human being. The captain will be the brain of the ship; his word will direct its movements, regulate its speed, and form its guide over the pathless sea. But he cannot be everywhere, nor is his voice as mighty as it ought to be, if it bore any proportion to his authority. This living brain has a nervous system (so to speak) of copper wires, which extend to its eyes—the men on the look-out; to its heart—the engines; to its stomach—the boilers; and to its hands—the man at the wheel.

Swift as that wonderful but unknown power which enables the human nerves to convey sensation or thought, will the electric spark “pass the word” along the wires, and the message will be delivered almost simultaneously with its setting forth. There will be no shouting, no bawling, no confusion of orders; the lightning is brought from the clouds, and made to write and to talk the language and the will of pigmy man.

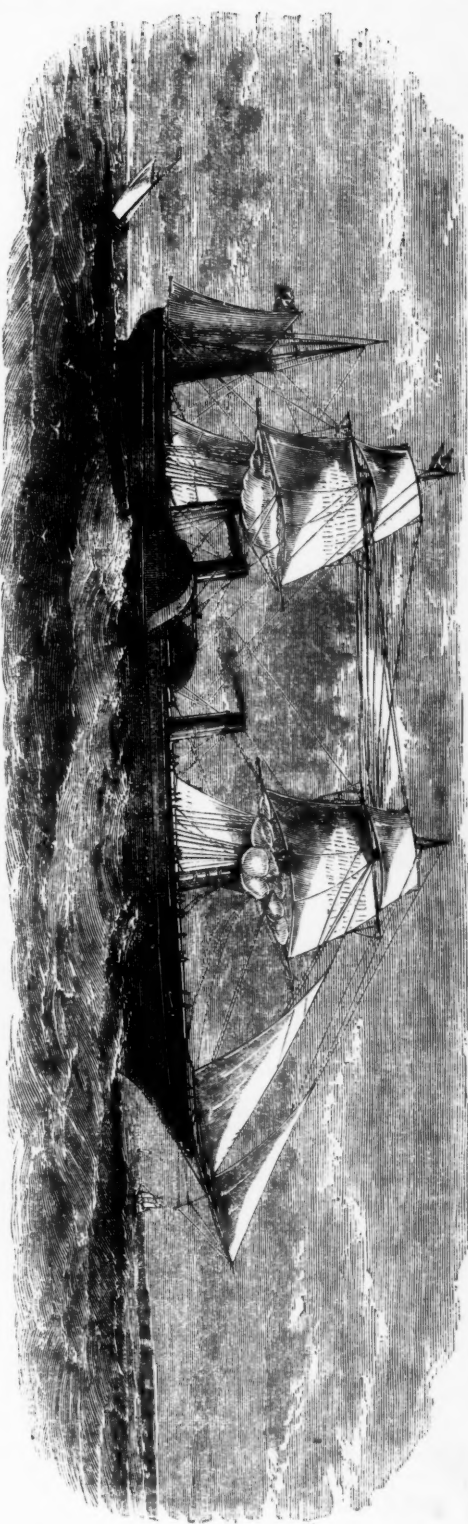
This assemblage of contrivances and skill is not to be brought together without a large expenditure of another metal, which we generally see in the shape of round yellow counters, bearing the portrait of her Majesty, and which is too valuable to be used in ship-building, but yet which has the power of causing ships to be built. An agreement was concluded with Mr. Scott Russell, on the 4th of April

* The total power of the Great Eastern is that of 12,000 horses, and she will go at the rate of nearly twenty miles an hour.

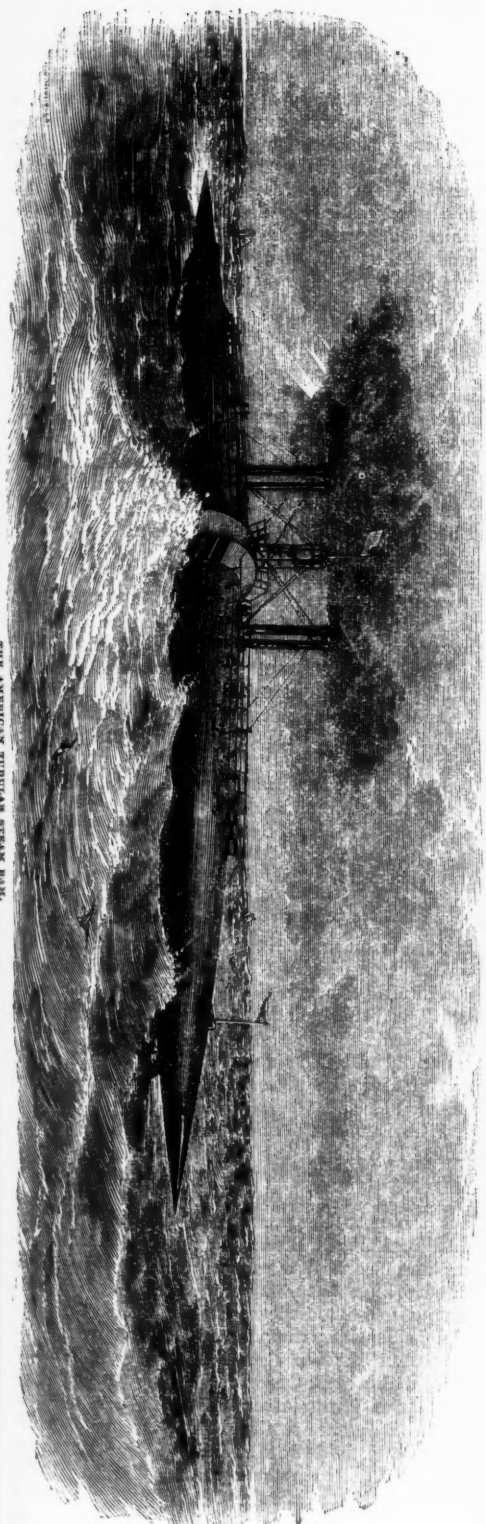


"THE GREAT EASTERN" STEAM-SHIP.

"THE GREAT EASTERN" STEAM-SHIP.



THE "PERSIA," (length 300 feet) ONE OF THE CUNARD LINES; THE LONGEST SHIP AFOAT BEFORE THE "GREAT EASTERN."



THE AMERICAN STEAMSHIP "THE GREAT EASTERN."

THE GREAT EASTERN "STEAMSHIP."

last, to complete her building, for £125,000, by the 4th of September, with a premium of £1000 a week for earlier completion, and a penalty of £10,000 a week for each complete seven days beyond the allotted time. This agreement includes the masts, sails, rigging, blocks, boats, cables, engines, boilers, iron-work, and wood-work, together with the passenger accommodation. Of course, such an extensive contract is not all performed by Mr. Russell himself, but is distributed among firms eminent for their various kinds of business. Thus, Messrs. Ferguson, the celebrated mast-makers, supply the masts and spars; and one of the wooden masts, be it noted, (the ship has three of wood, and three of iron,) is supposed to be the best and finest ever seen; it is formed of a single tree, a Canada pine, about 130 feet high, and proportionately thick. Messrs. Westhorpe take the rigging, Messrs. Hall the sails, Watt and Co. the screw engines, Mr. Russell the paddle engines, and so on; each firm sending its best work of the best material.

The strongest and the wisest man in the world is less thought of at first sight, if arrayed in shabby garments, than if he has a good coat on his back. The proprietors of the "Great Eastern" have accordingly given an extensive order to the ship's tailor to make her a smart outer garment, only the tailor in this case is the painter. To complete his contract, he will be obliged to use more than six tons of paint to give one coat to the interior iron-work, and nearly eight tons, to give one coat to the outside, from the water line to the bulwarks.

Thus, then, we have in this gigantic, and, I may say, national undertaking, an example of what man in a high state of civilization can do; we have before us the result of human thought, foresight, and calculation, embodied in a colossal but yet graceful and useful form. Weeks, months, nay, years of hard labour, their allotted duty on this earth, have been expended by thousands of human beings on the construction of this gigantic ship. "In the sweat of his brow"—his proper destiny—has man called into existence this emblem of peace and of the progress of civilization throughout the whole world. May good fortune attend her in her voyages; and may she long serve to remind us of the great Master-mind who called us, his creatures, into existence, and who has given us power, first to conceive, and then to carry out an undertaking so vast, so pregnant with good-will to all mankind.

As a contrast to the "Great Eastern," we give an engraving of the "Persia," which, until recently, was the largest of our ocean-steamers. Our readers will also be interested by the representation of a new tubular steamer, on an entirely new principle, in course of construction in America, of which possibly we shall hear more hereafter.

CLOCKS, AND HOW WE CAME BY THEM.

SUN-DIALS appear to have been in use at a very early age. The first of which there is any record is that of Abaz, who lived 742 years before Christ, though there is no reason for supposing that they were thus early constructed on mathematical prin-

ciples. As the world grew older, and mankind grew more sensible of the importance of time, they naturally sought for superior modes of measuring it. Clepsydrae, or water-clocks, which in a rude form had been coeval with the sun-dials, were made by the Alexandrians, to measure short periods of time with something like accuracy, and their use was adopted at about the same date (100 years B.C.), by the Greeks, to measure time in the courts of justice at Athens. Sand-glasses, by which time was measured by the dropping of sand through a tube, were invented about the same time, and after an interval of two thousand years they are still the clock of the indigent poor.

The water-clock, in an immense variety of forms, seems to have occupied the attention of inventive minds for many succeeding centuries. Cogged wheels were made to receive their impetus from falling water, and thus regularity of motion was continuously maintained, with a want, however, of equality of force. Great improvements were made in these clocks during the eighth and ninth centuries. In the year 807, the renowned caliph, Haroun Alraschid, sent as a present to Charlemagne a curious clock, in which wheels were set in motion by the fall of water, and which was the wonder of the world for a time. In the dial were twelve small doors, forming the divisions for the hours; each door opened at the hour marked by the index, and let out small brass balls, which, falling on a bell, struck the hours. The doors remained open until twelve, when twelve figures of knights on horseback came out and paraded round the dial-plate.

Even in modern times the water clock has deserved to rank among the most ingenious contrivances. Vailly, a Benedictine monk, is said to have given it the character of a scientific instrument, about 1690. His clock was made of tin, and consisted of a cylinder divided into several small cells, and suspended by a thread fixed to its axis, in a frame on which the hour distances, found by trial, were marked. As the water flowed from one cell into the other, it slowly changed the centre of gravity of the cylinder, and put it in motion so as to indicate the time on the frame. He subsequently added an alarm and a dial-plate, and thus in some degree realized the advantages of our common clock.

Who first set the example of constructing clocks moved by weights, is not known. It is said that such clocks, which struck the hours, were known in Italy in the latter part of the twelfth century; but the poet Dante, who was born in 1265 and died in 1321, is the first writer who alludes to a striking clock. We know that clocks were in use in our own country as early as 1288; for in that year a fine imposed on the Chief Justice of the King's Bench was appropriated to defray the cost of a clock for the clock-house near Westminster Hall, which clock was to be heard by the courts of law. The Westminster clock was considered of such consequence in the reign of Henry VI, which commenced in 1422, that he gave the keeping of it, with the appurtenances, to William Warby, dean of St. Stephen's, together with sixpence

a-day, to be received at the Exchequer. In the year 1326, Wallingford, Abbot of St. Albans, invented a clock which not only showed the hours, but the apparent motion of the sun, the changes of the moon, the ebb and flow of tides, etc.: but the most ancient clock of which there is any detailed description is that of Henry Vic, or De Wyck, a German, erected in the tower of the palace of Charles v, King of France, in 1379. This was but a rude and imperfect machine; but it contained, in the principles of its construction, the germ of our modern time-keepers, and we must glance at its mechanism for a moment.

De Wyck's clock, like the hall and kitchen clock of the present day, was set in motion by the gravity of a weight attached to a cord coiled round a cylinder or drum. The motion thus obtained, and which would continue as long as the weight continued to fall, was communicated from one wheel to another of the whole apparatus by means of their toothed edges, until it reached the crown or escapement wheel. The crown wheel is so constructed and situated as to act with its teeth on two small levers or pallets projecting from the upright spindle or axis of the balance, and to convert what would else be a circular motion of the balance wheel into an alternating or vibratory one. It is this alternating motion that causes the ticking of clock or watch. But a weight heavy enough to set all the wheels in motion, unless it were subjected to some check, would rapidly run down, and with a celerity increasing until the whole of the cord was uncoiled from the drum; and in fact, this is what does take place in modern clocks, whenever the pendulum is taken away and the weights remain attached to the cylinders. To prevent this rapid running down of the works, De Wyck loaded his balance with two weights; the farther these weights were placed from the axis or spindle, the more powerfully they resisted the rapidity of the rotation of the crown wheel, and therefore of all the wheels; and they could be so adjusted, with very little trouble, as to cause the wheels to move neither too fast nor too slow, but at the desired rate.

From this period, until the middle of the seventeenth century was approaching, there seem to have been few discoveries of any very grave importance in the art of clock-making. It is true that in this long interval some extraordinary undertakings were conceived and executed by the horologists of different countries. Thus, before the end of the fourteenth century, the famous Strasburg clock was erected in the cathedral church of that city. It was a complicated piece of mechanism, the plate exhibiting a celestial globe, with the motions of the sun, moon, earth, and planets, and the various phases of the moon, together with a perpetual almanack, on which the day of the month was pointed out by a statue; the first quarter of the hour was struck by a child with an apple, the second by a youth with an arrow, the third by a man with the tip of his staff, and the last quarter by an old man with his crutch. The hour itself was struck on a bell by a figure representing an angel, who opened a door and saluted the Virgin

Mary; near to the first angel stood a second, who held an hour-glass, which he turned as soon as the hour had finished striking. In addition to these was the figure of a golden cock, which, on the arrival of every successive hour, flapped its wings, stretched forth its neck, and crowed twice. The Strasburg clock did not stand alone in its glory. About the same time another mass of complicated machinery, though differing considerably in its catalogue of performances, was erected in the cathedral church of Lyons. Indeed, the wealthy towns of France, Germany, and the Low Countries now began to vie with each other in the construction of huge cathedral or municipal clocks, and to boast of the multiplicity of exploits performed by their favourites. Yet none of these vaunted mechanical wonders were to be relied upon for true information as to the time of day; it being a fact, that up to the middle of the sixteenth century scarcely a clock was in existence which did not depart from accurate time as much as forty minutes in the twenty-four hours, and those were thought models of precision which did not exceed that rate of variation.

It is the discovery of the phenomena of the pendulum by Galileo, which marks the grand era in the construction of clocks. In the year 1650, or thereabouts, Galileo, then a medical student, was sitting in the cathedral church at Pisa, and while apparently lost in devout attention to the service, was keenly speculating on the swinging motion of the lamps, as they waved from side to side. It struck him that the oscillations of the long pendulums, whatever was the distance travelled by the weight, were always performed in the same space of time by the same pendulum. He tested his theory by measuring the vibrations of the lamps as they swung, with the beatings of his pulse, and found that it was correct. He afterwards discovered what was ultimately demonstrated by Newton, that, "the shorter the pendulum, the less is the time of its vibration;" or, in other words, that the number of oscillations performed by a pendulum in a given time depends upon its length, four times the length producing twice the number of oscillations. Here was a most important and valuable discovery; but it is by no means clear that Galileo was the first person who thought of applying it to the construction of clocks; and the merit of the invention of pendulum clocks is generally attributed to Huygens, a learned Dutchman, in 1657. The invention is also claimed on behalf of Richard Harris, a London artist, who, it is affirmed, made a long-pendulum clock in 1641, seventeen years before the date at which Galileo describes himself as directing the construction of one.

The first application of the pendulum to clocks was far from a perfect success. There were radical defects in the clock of Huygens, which prevented its accurate performance; he had constructed his pendulum on an impracticable plan, which deprived it of the influence it should have had upon the wheels. Some few years after, a superior method was invented, by a London clock-maker of the name of Clement, who was enabled to increase the weight of the pendulum employed, and thus by its

vibration to control in a manner the motion of the whole machine. Clement called his the anchor escapement, and having undergone various improvements, it is still in use.

At the beginning of the following century another Englishman, George Graham, invented the repose, or dead escapement. By this invention the wheels are kept at rest during the whole oscillation of the pendulum, except at the instant of contact with the crown-wheel, and the oscillations are made in more equal times. Then the detached escapement was introduced; and after that, the half-dead escapement, a mean between the inventions of Clement and that of Graham. For all purposes of ordinary time-keepers this mode of escapement answered well.

But still, notwithstanding the remarkable improvements which had been effected, the best clocks, though finished with the most extreme care and pains, were found to vary in their performance, through the effect of atmospheric temperature. As in hot weather the pendulum expanded, or increased in length, whatever was the material of which it was constructed, and consequently vibrated slower, the result of the retardation became manifest in the loss of time by the clock. In cold weather the reverse took place—the pendulum, in consequence of contracting, vibrated quicker, and the clock gained on time. Various ingenious contrivances were therefore resorted to with the view of counteracting the influence of temperature on pendulums, and causing them to oscillate in all temperatures in equal times. Graham, the inventor of the dead escapement, at length hit upon a plan at once sound in principle and easy of application; indeed, so thoroughly did it answer the purpose for which it was designed, that it has undergone but trifling modifications up to the present hour. Graham called his invention the “mercurial compensation,” and it consists in using for a weight a jar containing quicksilver, attached to the lower end of the pendulum rod, which is formed of steel. As the steel rod lengthens by heat, the mercury expands in volume, and rises in the jar; and when the rod shortens by cold, the mercury contracts and sinks or falls. Thus the arc of oscillation is always maintained at the same distance from the point of suspension or upper extremity of the pendulum—or, in other words, the pendulum is kept always of the same length, and therefore will always oscillate at the same rate. In 1726, John Harrison invented what is called the gridiron pendulum, composed of rods of steel and brass so banded together that the rods which expand the most raise the weight at the bottom of the pendulum, as much as the rods which expand the least depress it. This pendulum is still much in use, but from the fact that metals expand and contract in such masses fitfully and by jerks, and not gradually, is considered not to answer so satisfactorily as the mercurial pendulum.

Meanwhile, improvements of another kind, in connection with other parts of the machinery of a clock, had been prosecuted with success. The first clocks were of great bulk, and adapted only for towers and turrets and public buildings; as they improved in structure and utility they were made of

smaller size, and found their way into the dwelling places of the people. Still, there could be really no such thing as an easily portable, or even a bracket clock, until the weight as a moving power could be got rid of. The substitution of a main spring for a weight took place about the middle of the sixteenth century: the mainspring, if it did not suggest it, in a manner necessitated the invention of the fusee; and both together, while they wrought a complete revolution in the art of clockmaking, may be said to have given birth to the art of the watchmaker. We shall have something to say on these inventions in a subsequent paper on watches.

We must touch briefly on that part of the mechanism of a clock which is employed for striking the hours. This is a curious and sometimes a very intricate piece of machinery, for clocks may be made to strike any number of times. Some of them strike hours, half-hours, quarters, and half-quarters, and will even repeat all these performances on a second bell, sounding a different note from the first. Some have been made to strike the bell as many as a hundred times between the hours, and we have seen one which was never silent three minutes together out of the whole twenty-four hours.

The moving power of the striking train, which is too various and too complicated to admit of description here, may be either a weight or a spring; but whatever it be, its impulse is only permitted to come into play when the hour or the quarter to be struck has arrived, at which moment it is brought into action by the temporary release of a catch or detent permitting the weight or spring to act on the striking mechanism. Whether the strokes on the bell shall be one or many is determined principally by two pieces of mechanism—one called a snail, with twelve steps, the other a rack, with twelve teeth. The time during which the striking weight is allowed to descend, varies according to the turning of the twelve steps of the snail on its axis, and the position of the twelve teeth of the rack, at different hours of the day—being sometimes long enough to permit one blow to be given by the hammer on the bell, and at another time long enough for twelve such blows. The bell itself is an important part of the striking apparatus. In domestic clocks, where all that is wanted is a note sufficiently loud to be heard through the house, a small saucer-shaped bell will answer the purpose; but where a cathedral clock is expected to send its information over a circuit of many miles, the case is widely different. Bells have been manufactured of all forms and in various ways, but they can only be made to send their tones to a great distance by casting them of enormous weight and of solid material—the best material being a compound of copper and tin. A gong of beaten metal may be made to yield as deep, and, to a stander-by, as loud a tone, though it weigh but a score or two pounds, as a bell of ten tons: but the gong will not be heard three hundred yards off, while the bell shall send its peal four or five miles. The bell which strikes the hours at St. Paul's Cathedral is often heard at night, when the wind

blows in that direction, at Windsor Castle, a distance of nearly twenty miles. This bell was cast in 1709, and weighs $5\frac{1}{2}$ tons: it is but an infant, however, compared to some others; that at Exeter weighs $5\frac{1}{2}$ tons; that at St. Peter's, Rome, 8 tons; that at York, 10 tons 15 cwt.; that at Notre Dame, Paris, 12 tons 16 cwt.; that at Vienna, 17 tons 14 cwt.; that at Novogorod, 31 tons; there is one at Pekin, in China, which weighs 53 tons; the bell at the Kremlin weighs 63 tons; and the great bell of Moscow, which was broken in 1737, weighed 193 tons!

We may close this paper with a glance at some few of the curiosities of clock-making, which from time to time have moved the wonder and admiration of mankind. We have mentioned the Strasburg clock, and alluded to others of a similar class; but there have been clocks far less intricate, which had a greater claim to be considered as curiosities. Thus, clocks were made in the seventeenth century, which were moved by balls running down inclined planes, swallowed up by, and traversing the bodies of brazen serpents, or descending in metallic grooves, to be again thrown up by archimedean screws. Some were made to go by their own weight, descending inclined planes, and thus avoiding the casualties to which weight-lines and mainsprings are liable; while others, by means of springs, were made to ascend such planes. One was simply hung like a lamp from the ceiling, and was kept going by its own descent, the winding it up consisting merely of pushing it again towards the ceiling. The dial of another formed the brim of a plate filled with water, in which swam a tortoise, turning round with the hour. This was managed by magnetic attraction. A marvel by no means uncommon, some years back, was a clock which showed exact time, and appeared to have no works—the hour hand proceeding from the centre of a crystal plate perfectly transparent, and moving round without any visible or indeed accountable connection with works of any kind. Again, clocks have been made to go for astonishing periods of time, without winding up. A clock to go for a whole year is nothing extraordinary. Many will go for 400 or 500 days—some for two years, and some for three; and there is a tradition concerning one which we saw in the palace at Versailles, to the effect that it needed winding up but once in a century.

The most remarkable assemblage of clocks ever seen in the world was that which was collected together in the Great Exhibition of 1851. There, all that art, science, and the most persevering and elaborate skill could achieve in the department of the horologist, was exhibited at one view. A single clock was shown, which had occupied thirty-four years in its construction. It was made by Jacob Loudan, was a perpetual almanack as well as a clock, and performed more functions than we have space to set down. Amidst all the horological marvels there exhibited, however, the greatest was undoubtedly the electro-magnetic striking clock of Mr. Shepherd, whose dial, as many of our readers will remember, were the radiating bars of the southern elevation of the transept. In this clock

the pendulum was kept in motion by electro-magnetism, which was made to bend a spring to a certain extent, the reaction of the spring imparting the necessary impulse—a means which prevented the variations of the battery from influencing the mechanism. The advantages of such a clock as this are many, and not the least is that by a single pendulum any number of dials, scattered throughout a large establishment, may be made to show precisely similar time, simply by the scientific adjustment of communicating wires between them and the pendulum.

The new Westminster clock, with its tower and bells, its mechanism and its dials, is too large a subject to touch now, our time having run out, and our space too.

A PARSEE FESTIVAL.

PROPITIATING THE OCEAN.

Just before the commencement of the severest of the two monsoons and towards the close of the year 1829, I chanced to be residing for a few months at Cochin, a noted seaport town on the coast of Malabar, and there witnessed the celebration of an annual festival, rigidly observed by the Parsees both at Cochin and at Bombay. The festival was one in honour of the titular goddess or patroness of the seas, and the offerings made upon the occasion were presumed to propitiate this fickle sovereign to favour ships and boats owned or navigated by Parsees, with that mild clemency which was not to be expected along the coast, nor indeed over the length and breadth of the Bay of Bengal, so long as the monsoon endured.

So very little is known of this singularly isolated and pacific people, or of their creed or domestic economy, that it may not prove void of instruction to note one circumstance connected with their outward ceremonies. Setting aside their "bonds," which unhappily bind them deeply in paganism, there are few civilized people that might not benefit by a lesson from the Parsees. With hardly an exception, they are noted as peaceable and loyal subjects, men of immense energy and perseverance, and generally of good understanding. You shall scarcely meet a Parsee of any rank in Bombay, who cannot converse fluently with you in English; and amongst the better classes they include some of the best scholars in India. As a specimen of their willingness to co-operate with and assist the rulers of the land, we cannot evidence a fitter man than the late Sir Jamsejee Jejeeboy, first a knight and afterwards a baronet, and a patron and supporter of many good works and charities. There are several other Parsees who have worked their way into notice and position entirely by their own character, perseverance, and talents. A fine sample of this latter class visited England on sick leave a few years ago. He was master shipwright in the government dockyard at Bombay, and in the receipt of £800 per annum. As a class they are undoubtedly a well-to-do people. In the government offices, and in every branch of official employment, we find Parsees by scores, holding posts which, though not lucrative at first, lead steadily on to independence.

Then, again, in the mercantile world, one half of the merchants are Parsees, some established and associated amongst themselves, others partners with noted English houses at Bombay. They are, moreover, extensive and wealthy shipowners, constructing stately teak-built vessels at Bombay and in the Cochin river, some of which have often visited the London docks, and puzzled the dock labourers with their unpronounceable names. The "Pestongee Bomangee" troop-ship—who has not heard of her? or the "Lowgee Family" and the "Cowajee Damagee?" All these, and many others—fine stately ships, well built and riveted, well rigged and stored, well manned and navigated—have been constructed and are owned by Parsee gentlemen at Bombay (which is their adopted home), at Cochin, Ceylon, Singapore, Siam, and China. And yet, strange to say—a people so prominent in wealth, good sense, education, and stanch loyalty, who often come to be educated in England, who may be encountered any summer's day on the shady side of Lendenhall Street, with unmistakable head-dress and other singular costume—strange to say, the majority of Englishmen know little or nothing of the real creed and doctrines of the Parsee or of his domestic economy.

With regard to their religious observances, they themselves seem to maintain a jealous secrecy almost equal to that observed by Masons or the Druses of Mount Lebanon. It is a very well understood fact, however, that they are fire-worshippers—not the mere element of fire, but worshipping the Deity through that symbol. It is also well known that they neither bury nor burn their dead. A large high-walled inclosure, some distance from the town, is set apart for the disposal of the dead. Carried in thither on a litter, the body is exposed on a platform under the canopy of heaven. On the third day the relatives, I was informed, visited the corpse of their departed friend, which in the interval had been nearly devoured by voracious kites, vultures, and crows. If perchance either eye remained in its socket, from this fact they come to some conclusion as to the probable future state of the deceased. Should the right eye have disappeared first, it was a favourable omen; if the left eye, a most unfavourable one. In cases where both eyes were gone (and I imagine, considering the enormous flocks of vile vultures and kites that were continually hovering over this foul neighbourhood, that out of ninety-nine cases in a hundred such must have been the case), then the friends were left in darkness as to the immortal state of the defunct.

With these two specimens we must quit the subject of Parsee superstitions. Considering their usual intelligence, however, we marvel that a body of enlightened men, as far as general education is concerned, can still submit to such thralldom. We now return to the more immediate subject of this paper, which is to illustrate the celebration of one of their annual festivals.

Cochin, as a great ship-building port, owing to its deep and navigable river, and also as a place where living, labour, and material were marvellously cheap, possessed great attractions for the careful and speculative Parsees; and they consequently

flocked hither by shoals, settling down for good, or else making periodical trips to and fro between this place and Bombay.

There was one remarkable circumstance connected with these Parsee settlers and traders, worth recording, namely, that a great proportion of them were affected more or less with leprosy—a disease almost unknown in other parts of India; whilst they, in common with other strangers, were exempted from the elephantiasis, a fearful disease of the legs, to which the natives of Cochin, of both sexes, were generally liable. Whether, owing to this calamity, they were forced into temporary exile, it is hard to say; but the fact existed, and I believe still exists.

As a further proof of the cheapness of labour, living, and material at Cochin, I may be permitted to state that in no other part of India are so many Jews congregated as at Cochin; consequently, Cochin must be a cheap place. There is an Indian proverb that vouches for this fact, namely, that wherever there is anything to be gained, there you will surely meet with a Jew, a crow, and a jackal.

It was on one of those delicious semi-autumnal, semi-spring days, so common on the coast of Malabar just previous to the setting in of the monsoons, when the anniversary of the Parsee festival came round. Whether its kalends were duly noticed in Parsee almanac, or its celebration depended upon any particular phases of the moon or other planet, I am unable to say. I can only vouch for the fact of Herr Van Dersluyt, a corpulent Dutch burgo-master, then enjoying a British pension, tapping at my window whilst I was poring over the last newspaper from Madras, and inviting me to accompany him to witness the ceremonial in question. Immediately donning a capacious straw hat, I hurried out into the street, and joined the illustrious Herr, and under the protection of his huge umbrella, issued forth from the streets of Cochin, to that part of the sea beach where the ceremony was transacting.

Considering the every-day monotony of Cochin life—which embraced certain hours for labour, and certain hours for exercise, and nothing else—the commotion occasioned by this Parsee festival was almost alarming. It was a positively ascertained fact that one or two wealthy Dutch burghers—secluded old gentlemen, who led the life of an oyster, and who were seldom seen at other post, or engaged in other occupation, save at the front parlour window, smoking—were actually seen trotting down, umbrella in hand, towards the scene of action, attracted by the tumult of tom-toms and the acclamations of delighted multitudes.

The site chosen for the offering which was supposed to pacify the turbulent waves, was (to our secret horror, we discovered) a rocky promontory, jutting a considerable distance into the sea, close to its junction with the Cochin river. This spot was looked upon by H. (the subaltern commanding the infantry detachment) and myself, as our personal right and property, because here, after much exploration, we had discovered a prolific oyster-bed, which afforded us entertainment and a relish, not easily procurable elsewhere in the town, and the

very existence of which we had maintained a state secret. It was evident, however, that our secret and our fishy wealth were likely to remain safe, for it was solely attributable to these annual Parsee solemnities that the native boatmen were prevented by their superstitions and fears from prowling about in the neighbourhood, and discovering our marine treasure trove.

Reassured on this point, and accompanied by several other friends who had joined us, we ultimately mingled with the motley crowd assembled, and, elbowing our way through, we took up as favourable a position as the slimy, slippery nature of the rocks would admit.

Foremost in the tablean before us, stood three Parsees in undress costume; that is to say, they had divested themselves of all superfluous overgarments, and only retaining their high caps, they officiated as priests for the remainder of their brethren, who were congregated close by them. By their sides were numerous baskets and trays, covered over with snowy-white napkins, and containing the free-will offerings of the Parsee residents. I did not observe a single woman of that persuasion present. The head Parsee, or priest, or whatever he was, murmured something over each basket or tray, and then handed it to the person next to him, whilst a third waved incense to and fro over the whole. He that had the basket handed to him, immediately removed the napkins, and with a loud voice, repeating some article of their faith, flung forth into the ocean handful after handful of the contents, and this amidst the dinning and hideous clamour of tom-toms and cholera horns, and the loud and repeated shouts of the Parsees present.

The whole of the Parsees were in holiday attire, and most of the spectators were respectably clad, but, as a matter of course, in a great variety of colour and costume. There were bullock carts and palanquins literally groaning under the weight of these free-will offerings, to be chucked into the sea. The hour was about 4 P.M. The sea breeze blew pleasantly over the heated rocks and beach; the sun shone brilliantly, and the clear blue sky had hardly a cloud to chequer its enamel. Even the restless waves had settled down into a quiet moaning restlessness, and all seemed propitious for the purpose to which the pagan festival was devoted. But what made the scene irresistibly ludicrous was the fact that, as far as safety would admit, the whole sea in the neighbourhood of these rocks was literally alive with—not sharks, nor porpoises, nor whales, nor emissaries from the titular deity of the seas, come to receive these free-will offerings with becoming decorum—but noisy, shouting, clamorous, splashing, joyous native youths and children—Jews, Christians, Mahometans, Pagans—all anxious and scrambling with one another to catch some portion of the good things heaved into the ocean. Now they might be seen diving after coins, and now re-appearing with sugar-cane or some sweet stuff, firmly compressed between their teeth.

This peace-offering included dried and fresh fruits, nuts, spices, drugs, sweetmeats, conserves,

and even jewellery and coins. There is no doubt that many things thus thrown into the sea, escaped the eager eye and clutch of the many-eyed multitude awaiting them in the water. Indeed, some few things were washed ashore afterwards, and the rest, I presume, were swallowed by fish, or perhaps even by some of our own oysters; though I never had reason to congratulate myself on the finding of a single pearl or other precious stone in any one oyster I opened and devoured at Cochín.

I only know of two instances of extravagant folly at all similar to that just described. The one is a festival observed by the Siamese, in which they annually, according to their means, let drop a silver coin down a fathomless fissure in a rock, not far from Bangkok. The second instance was that of a British Jack-tar, who had fought bravely and starved uncomplainingly throughout the Don Pedro campaign in Spain. Reckoning day at last came, and Jack received all his back pay and prize money in a lump. Being all in dollars, and the place of payment a miserable out-of-the-way sea-side village, Jack, after lugging this precious cargo to and fro with him under a broiling hot sun, got so exasperated with the weight, that, after separating five or six dollars from the bulk, he exultingly chucked the remainder into the sea, actually delighted thus to rid himself of an incubus.

A FEMALE CRUSOE.

ONE of the earliest travellers on the overland route, in search of the north-west passage, was Mr. Hearne, who, during the years from 1769 to 1771, made three several journeys towards the Copper Mine river, in full expectation of finding a northern ocean, the existence of which, it was inferred, would establish the fact of a sea route north of the great American continent. In those journeys he encountered the most frightful perils and underwent astonishing hardships, not a whit less cruel than the worst of those endured by modern travellers, and he manifested unparalleled fortitude in contending against them. The third journey to some extent established the fact, the verification of which was the chief object of his expeditions, and moreover corrected some important errors in the reports of preceding explorers. But we have nothing to say on that subject here. Mr. Hearne's expeditions have long been a dead letter; and we refer to them only for the purpose of introducing an episode in his adventures which strikes us as affording, perhaps, the most remarkable instance of female resources and self-reliance ever recorded.

When Mr. Hearne, with a company of Indian guides, was travelling in the arctic circle, not far from the Lake Athapuscow, one of the guides came suddenly upon the track of a strange snowshoe. Astonished at the sight, in a region supposed to be hundreds of miles from any human habitation, the Indians followed up the track, and after pursuing it for some distance, arrived at a small hut or cabin, formed of snow and driftwood, where they discovered a young woman sitting

alone. She understood their language, and did not need much persuasion to induce her to return with them to the traveller's tent. Here, on being interrogated, she told her story; when it came out that she was a native of the tribe of Dog-ribbed Indians, who were, or had been, at feud with the Athapuscans, and that at an inroad of the latter, during the summer of 1770, she had been taken prisoner and carried off to slavery. In the following summer, when the Athapuscans were travelling the country, she watched her opportunity, and, on arriving near the place where she was found, managed one night to give them the slip, intending to find her way back to her own people. In this, however, she was disappointed. She had been carried away in a canoe, and the twistings and windings of the river were so many and intricate, and so often intersected each other, and there were so many lakes and marshes, that she found it impossible to pursue her route. In this dilemma, instead of resigning herself to despair, she set about building a dwelling for a shelter during the winter, and having completed it, she calmly took up her abode and commenced her solitary housekeeping.

She had kept an account of all the moons that had passed; and from this it appeared that for seven months she had not seen a human face, and had subsisted in this desolate region entirely by her own unaided exertions. How had she contrived to sustain life? When asked that question, she said that when she ran away from her captors she took with her a few deer sinews. With these she made snares, and caught partridges, rabbits, and squirrels; she had also killed a few beavers and porcupines, and was not only not in want of food at the period when she was discovered, but had a tolerably good stock of provisions laid up for future use. When the snares made of the deer sinews were all worn out, she was ready with another stock manufactured with sinews drawn from the legs of the rabbits and squirrels which had fallen victims to her cunning. But this "exemplary female" had not only well stocked her larder by the exercise of industry and forethought, but had also taken equal care of her wardrobe. From the skins of the various animals she had caught she had made up an excellent winter suit, which was not only warm and comfortable, but, according to Mr. Hearne, was put together with great taste and exhibited no small variety of ornament. "The materials, though rude, were curiously wrought, and so judiciously arranged as to make the whole garb have a pleasing though somewhat romantic appearance." Her working implements consisted of the broken shank of an iron arrow-head, and a few inches of iron hoop roughly sharpened with a knife; and with these she had constructed not only her dress, but a pair of substantial snow shoes, and several other useful articles.

The keeping up her fire had given her most trouble. With two sulphureous stones she could, by dint of violent friction and continuous pounding, raise a few sparks so as to kindle a handful of loose fibres of wood carefully picked small; but

the labour was wearisome and long; and to avoid the necessity of it, she had not suffered her fire to be extinguished for many months. She was never idle. When fatigued with the toils of the chase, or when she was not under the necessity of hunting, she occupied herself in peeling off the thin inner bark of the willow trees with which the spot abounded, and twisting it into a species of twine. Of this sort of line she had already accumulated several hundreds of fathoms in length; and it was her intention to make of them a capacious net for fishing, as soon as the frost should break up and the streams become practicable.

Of this remarkable female, Mr. Hearne, in his journal, says: "She was one of the finest women I have seen in any part of North America." It would seem that his Indian guides were of the same opinion; and that, while they admired her for the comeliness of her person, they were by no means insensible of the value of her multifarious accomplishments. There was not a man among them who did not desire to have her for his wife; so, according to the custom of their tribe, they put her up to competition, and wrestled in the ring for her—the strongest of the party, after he had overthrown all the rest, having her duly assigned to him.

We might add a whole volume of reflections upon the cheerful, active, womanful spirit of this female Crusoe, uncivilized as she was, as contrasted with the desponding helplessness which we too often witness among women, and men too, who, with every motive to industry and activity, and every encouragement to exert both, lose all self-reliance under the first shock of adversity, and pass their days in useless indolence and repining. We forbear, however; such a history is better without a set moral, and carries its own comment.

POEM WITH A MORAL.

A MAN in his carriage was riding along,
A gaily-dressed wife by his side;
In satin and lace she looked like a queen,
And he like a king in his pride.

A wood-sawyer stood on the street as he passed;
The carriage and couple he eyed,
And said, as he worked with his saw on a log,
"I wish I was rich and could ride."

The man in the carriage remarked to his wife,
"One thing I would do if I could—
I'd give all my wealth for the strength and the health
Of the man who is sawing the wood."

A pretty young maid with a bundle of work,
Whose face as the morning was fair,
Went tripping along with a smile of delight,
While humming a love-breathing air.

She looked in the carriage, the lady she saw,
Arrayed in apparel so fine,
And said, in a whisper, "I wish from my heart
Those satins and laces were mine."

The lady looked out on the maid with her work,
So fair in her calico dress,
And said, "I'd relinquish position and wealth
Her beauty and youth to possess."

Thus it is in this world, whatever our lot,
Our minds and our time we employ
In longing and sighing for what we have not,
Ungrateful for what we enjoy.

We welcome the pleasure for which we have sighed,
The heart has a void in it still,
Growing deeper and wider the longer we live,
That nought but Religion can fill.